IN THE CLAIMS

What we claim is:

5	1.	Apparatus	for	hydroenhancing	а	fabric
	comprisir	ng:				

a support surface for the fabric;

a supply of pressurized liquid;

a manifold having a longitudinal axis and having at least one orifice for the discharge of the pressurized liquid, where the orifice

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- a) has a major axis that is at least one and a half times its minor axis
- b) and the major axis of the orifice is not parallel to the longitudinal axis of the manifold
 - c) and the pressurized liquid emerges from the orifice as a jet directed toward the support

surface; and

means for inducing relative motion between the fabric and the manifold.

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2. The apparatus for hydroenhancing a fabric as described in **claim 1** where the manifold has multiple orifices for the discharge of the pressurized liquid.

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3. The apparatus for hydroenhancing a fabric as described in claim 2 where the longitudinal axes of the orifices are perpendicular to the longitudinal axis of the manifold.

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4. The apparatus for hydroenhancing a fabric as described in claim 2 where the longitudinal axes of the orifices are at a non-perpendicular angle to the longitudinal axis of the manifold.

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5. The apparatus for hydroenhancing a fabric as described in claim 2 where the longitudinal axes of the orifices are parallel and the distances between adjacent orifices are equal.

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6. The apparatus for hydroenhancing a fabric as described in claim 2 where the longitudinal axes of the orifices are parallel and the distances between adjacent orifices are varied.

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7. The apparatus for hydroenhancing a fabric as described in **claim 2** where the direction of relative motion between the fabric and the manifold is perpendicular to the longitudinal axis of the manifold.

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8. The apparatus for hydroenhancing a fabric as described in **claim 2** where the liquid jets are directed toward the support surface in a direction that is normal to the support surface.

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9. The apparatus for hydroenhancing a fabric as described in claim 2 where the liquid jets are directed toward the support surface at an angle that is at least 5 degrees from normal to the support surface.

- 10. The apparatus for hydroenhancing a fabric as described in claim 2, where the fabric moves past a stationary manifold.
- 11. The apparatus for hydroenhancing a fabric as described in **claim 10** where the support surface is flat.
- 12. The apparatus for hydroenhancing a fabric as described in claim 10 where the support surface is curved.
- 13. The apparatus for hydroenhancing a fabric as described in claim 10, where the support surface is foraminous.
 - 14. The apparatus for hydroenhancing a fabric as described in claim 13, where the support surface has a

first side for supporting the fabric and a second side; and

further comprising means for creating a partial vacuum on the second side of the support surface.

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15. The apparatus for hydroenhancing a fabric as
described in claim 1 where

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the orifice has a liquid-entry face and a liquidexit face and has side walls defined by elements connecting the liquid-entry and liquid-exit faces; and

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the elements of the side walls are parallel so that the liquid-entry face and liquid-exit face have substantially the same size and shape.

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16. The apparatus for hydroenhancing a fabric as
described in claim 1 where

the orifice has a liquid-entry face and a liquidexit face and has side walls defined by elements connecting the liquid-entry and liquid-exit faces; and the elements of the side walls are divergent running from the liquid-entry face toward the liquid-exit face so that the liquid-exit face is substantially larger than the liquid-entry face.

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- 17. The apparatus for hydroenhancing a fabric as described in claim 5 where the orifices have a width from about two one-thousandths of an inch to about ten one-thousandths of an inch (.002-.010 inch) and a length of at least twice their width.
- 18. The apparatus for hydroenhancing a fabric as described in claim 17 where the longitudinal axes of the orifices are perpendicular to the longitudinal axis of the manifold.
 - 19. The apparatus for hydroenhancing a fabric as described in claim 5 where:

the orifices have a width from about two onethousandths of an inch to about ten one-thousandths of an inch (.002-.010 inch) and a length of at least twice their width; and

each of the orifices has about the same width and length.

20. The apparatus for hydroenhancing a fabric as described in claim 5 where:

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the orifices have a width from about two onethousandths of an inch to about ten one-thousandths of an inch (.002-.010 inch) and a length of at least twice their width;

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each of the orifices is about the same width; and

the orifices have varying lengths.